### **SIM**PLIFIED LESSONS IN CARE OF AUTOMOBILE

Use of the Clutch Is Text of Guerrlich's Machine Talk To-Day.

ONE THING DRIVER MUST KNOW

Otherwise He Will Never Be Able to Handle His Car Well-Expert Tells of Proper Way to Start Motor-Many Queries Answered.

AUTO LESSON NO. 89. (Copyrighted, 1918, by Frederick G Guerrlich.)

Before a person can drive a car we'll tate his clutch.

at the wheel of a car for some and who, when their car is park with others and in close quarters. it almost impossible to get it out without moving the others. It is which is responsible for this.

In most cases the fault is not theirs who instructed them in driving. Most tustructors, when telling a new driver bow to start the car, simply tell him to let the clutch up slowly. This is

The proper way to start a car is the jerk. The proper way to start a car is to shift to low, give the engine a little privers often believe that their ename the most cominon.

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In some cars the pedal is connected gas, and then, while observing the car. let the clutch in very slowly, until the car just begins to move, when the dutch must be held, the "letting in" atopping altogether, until the car has moved a few feet. Then, and while car is in motion, the clutch can slowly be let in the rest of the way. It is this stopping of the raising

the force of this friction being just enough to move the car slowly, but or make the car jump ahead.

In telling in a previous lesson of how the clutch depends upon friction of how, when a hoat is to be towed the tow-line, and, gradually, let it slip through his fingers until the boat when he will gradually let it become taut, and then will let it go altogether. the knot replacing his hands. ing the clutch is like the letting of the rope slip through the fingers.

Another thing which many drivers cannot accomplish, the success of which depends upon the manipulation of the clutch, is the starting of the car on a steep grade.

both the brake and clutch pedal, shift to low gear, give the engine some gas grade, the more gas), and then slowly let up on both pedals, the clutch pedal a little faster than the brake. will finally come to a point in letting in the clutch, where the engine and clutch will prevent the car from sliding back. Hold the clutch at this point, quickly let go the brake, give the engine more gas. As the car begins to move slowly, let the clutch in the rest of the way

Many drivers prefer to hold the car from sliding back by the handbrake when starting on a hill. This has the advantage in that the foot can be used for controlling the gas. however, prefers the former method and has found, while instructing that

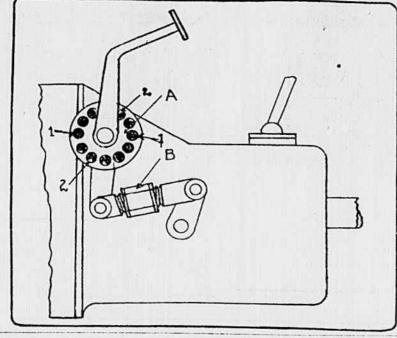
it is the easier method to new drivers. Note that the holding of the clutch pedal, at the apoint where the clutch just begins so saske the car move, is again the secret of success of the operation.

Where the car starts with a jerk, in spite of care in letting in the clutch the fault may be in the clutch itself. in this case the clutch is said to "grab," or "grip." The remedy for this was given in a previous lesson.

In the case of a cone clutch, it is

sometimes found that even though the leather be in fine condition and the apring adjustments right, that the clutch still grabs A way in which this might be remedied is to collect 3 number of the thin corks found in ottle caps, and pry up the leather about every thirty degrees and inserthese corks. Many clutches have corks

#### The Use of the Clutch



clutch," which is the secret of a smooth ning when free from both the engine will result in a little more throw of Holding the clutch in this way, al. fails to completely disengage, it is In other

from neutral to any gear. It can be distinguished from the dragging by the fact that if a little time is allowed to elapse, before making the shift, there will be no grinding, which will

for its action, I used the illustration of how, when a boat is to be towed.

The clutch must stop spinning gradto stop the spinning must not be too

for fine springs fixed under the leather in this way by the makers.

A slipping clutch will also cause a jump in starting the car, but, in this case, the engine will seem to run away from the car, when it first starts, and will then suddenly take hold, causing the jerk.

Drivers often believe that their engine lacks power, because the car slows down on a hill, when, in fact, the fault is a slipping clutch.

Much of the trouble experienced in shifting gears, in fact, most of the trouble, can be laid to the action of the clutch.

It is absolutely necessary, when shifting gears, that the clutch be fully disengaged, and that it slowly stop spinning when free from both the engine and the transmission. When the clutch fails to completely disengage, it is ly be let in the rest of the way.

It is absolutely necessary, when shifting gears, that the clutch be fully discipled and that it slowly stop spin.

It is absolutely necessary, when shifting gears, that the clutch be fully discipled and that it slowly stop spin.

In other cars there is a rod, with a Holding the clutch in this way, allows it to slip. This means that there is but a small amount of friction becated by a difficulty in shift the gears, and to the clutch throw-out shaft. A spinning clutch will cause a clash.

A spinning clutch will cause a clash, and the clutch throw-out shaft. You will have to study this, on your car, to see whether shortening or lengthening the rod will give a greater throw.

> by the clutch throw-out collar, which can screw in or out of the clutch as

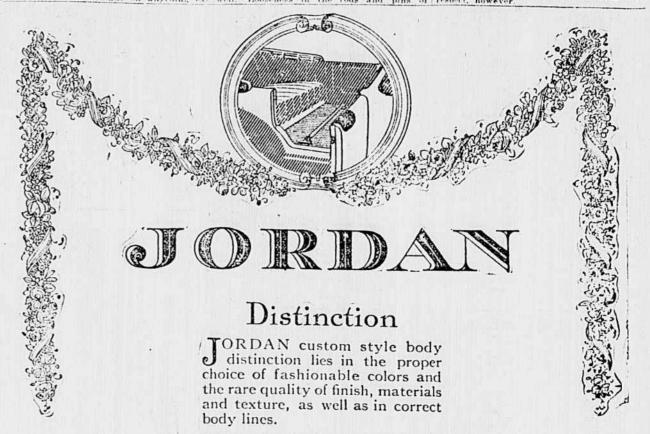
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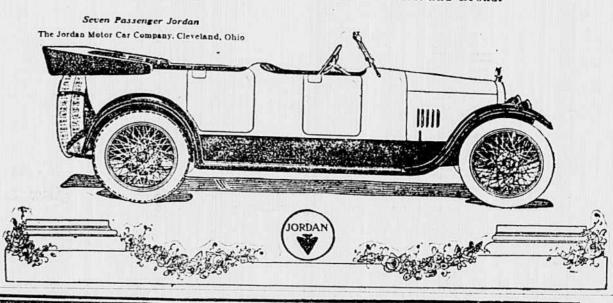
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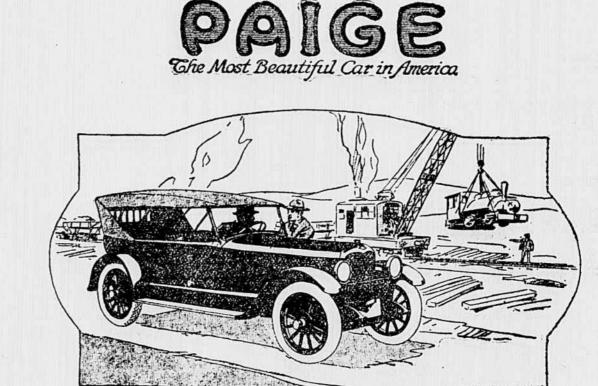
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